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Davide Filizola

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FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER
LLP

901 NEW YORK AVENUE, NW
WASHINGTON, DC 20001-4413

EXAMINER

LY, NGHI H

ART UNIT

PAPER NUMBER

2617

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 48 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 48 recites "a computer readable medium storing instructions for execution on at least one electronic computer, the instructions and-comprising portions of software code capable of implementing a method for estimating a field received from at least one source of electromagnetic field". Therefore, the claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 25-27, 30, 33-35, 38, 41, 42 and 44-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sessions (US 6,397,062) in view of Forstrom et al (US 2003/0092448A1).

Regarding claims 25, 33, 41, 44 and 48, Sessions teaches a method for estimating a field received from at least one source of electromagnetic field (see Abstract and column 1, lines 17-23), the method comprising: defining a propagation model for estimating the field received from the at least one source of electromagnetic field at a determined position of a territory (see column 2, line 39 to column 3, line 32 and column 3, line 54 to column 4, line 6).

Sessions does not specifically disclose modifying the propagation model according to topology characteristics of the at least one source of electromagnetic field,

and using the modified propagation model to estimate the field received from the at least one source of electromagnetic field at the determined position of the territory.

Forstrom teaches modifying the propagation model according to topology characteristics of the at least one source of electromagnetic field (see [0026], [0032], [0036] and [0075]), and using the modified propagation model to estimate the field received from the at least one source of electromagnetic field at the determined position of the territory (also see [0026], [0032], [0036] and [0075]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Forstrom into the system of Sessions in order to establish a common time reference frame for the emitted signal detections, each receiver communication device exchanges time synchronization signals with a reference communication device (see Forstrom, Abstract).

Regarding claims 26 and 34, Sessions teaches modifying the propagation model and using the modified propagation model to estimate the field further comprise: comprising the steps of: defining a plurality of propagation models each configured to estimate the electromagnetic field received from the one or more electromagnetic field sources, identifying at least one parameter corresponding to the topologic characteristics of the one or more electromagnetic field sources, the at least one parameter having a range of variability, subdividing the range of variability of the at least one parameter into a plurality of intervals, each interval in the plurality of intervals being associated with a different propagation model in the plurality of propagation models, selecting one of the plurality of propagation models based on a value of the at least one

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parameter, and using the selected propagation model to estimate the electromagnetic field at the determined position of the territory (see Abstract, column 1, lines 17-23 and column 1, lines 39-52).

Regarding claims 27 and 35, Sessions teaches identifying at least one parameter identifying the topologic characteristics, and estimating the field at the determined position by using a single propagation model, the single propagation model being modified in parametric fashion as a function of the value of the at least one parameter identifying the topologic characteristics (see column 2, line 39 to column 3, line 32 and column 3, line 54 to column 4, line 6).

Regarding claims 30 and 38, Sessions teaches the step of modifying the propagation model according to a parameter identifying the density of the cells of the cellular network (see column 1, lines 39-65).

Regarding claim 42, Sessions teaches the network is for mobile communications (see column 1, lines 15-38).

Regarding claim 45, Sessions teaches the method is used to estimate the field for simulating a mobile radio network able to use a simulation of the physical layer of the networks (see column 3, line 54 to column 4, line 6).

Regarding claim 46, Sessions teaches the method is used to estimate the field for planning a mobile radio network (see column 2, line 39 to column 3, line 32).

Regarding claim 47, Sessions teaches the method is used to estimate the field for locating mobile terminals in a mobile radio network (see Abstract, column 2, line 39

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to column 3, line 32 and column 3, line 54 to column 4, line 6).

5. Claims 31 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sessions (US 6,397,062) in view of in view of Forstrom et al (US 2003/0092448A1) and further in view of in view of Alden et al (US 2003/0231141A1).

Regarding claims 31 and 39, the combination Sessions and Forstrom teaches claims 25 and 33. The combination Sessions and Forstrom does not specifically disclose the step of modifying the propagation model according to a parameter identifying the distance of the determined position with respect to the source of electromagnetic field of the plurality of sources of electromagnetic field that is closest to the determined position.

Alden teaches the step of modifying the propagation model according to a parameter identifying the distance of the determined position with respect to the source of electromagnetic field of the plurality of sources of electromagnetic field that is closest to the determined position (see [0011] to [0014]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Alden into the system of Sessions and Forstrom in order to measure electromagnetic wave field quantities and in particular to antenna arrays having an arrangement of antenna elements with specific dimensions, spacing and impedance for improved performance (see Alden, [0002]).

Allowable Subject Matter

6. Claims 28, 29, 32, 36, 37 and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 28, 29, 32, 36, 37 and 40 are objected for the reasons as stated in the previous Office action page 6 (dated 08/14/2008).

Response to Arguments

7. Applicant's arguments with respect to claims 25-27, 30, 31, 33-35, 38, 39, 41, 42 and 44-48 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571)272-7911. The examiner can normally be reached on 9:30am-8:00pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nghi H. Ly

/Nghi H. Ly/
Primary Examiner, Art Unit 2617